

REMARKS

Claims 1, 7, 9-14, 17, 19, 24, 25, 28-31, 35 and 36 are pending. Claim 1 has been amended to incorporate the requirements of claim 8.

I. Anticipation Under 35 U.S.C. 102(b)

Reconsideration is requested of the rejection of claims 1-14, 17-19, 24, 25, 28-31, and 34-36 under 35 U.S.C. 102(b) as being unpatentable over WO 97/07173, as evidenced by its English-language equivalent, U.S. Patent No. 6,726,798 (Boege et al.).

Claims 1-14, 17-19, 24, 25, 28-31, and 34-36

Claim 1 is directed to a film-forming composition comprising a continuous aqueous phase and a dispersed phase. The dispersed phase comprises (i) a particulate polymer or emulsified liquid prepolymer, and (ii) a coalescent aid comprising an ester having the formula RCOOX wherein R and X are independently hydrocarbyl or substituted hydrocarbyl; at least one of R and X comprises at least two unsaturated aliphatic carbon-carbon bonds; and the weight of the ester is (i) about 0.1% to about 4% of the weight of the particulate polymer or liquid prepolymer and (ii) at least about 50% of the coalescent aid. In addition, the ester is derived from a fatty acid of corn oil, sunflower oil, soybean oil, or linseed oil

Boege et al. disclose compositions for bonding, coating and sealing that contain a styrene binder and a "fatty" compound as a plasticizer. Significantly, however, Boege et al. do not specifically disclose a composition possessing an ester specified by claim 1 in the amount required by claim 1.

For use as a plasticizer, Boege et al. nominate a wide range of "fatty" compounds. They specifically identify fatty acids, fatty alcohols and derivatives thereof with this description consuming nearly three columns of text of U.S. Patent No. 6,726,798.¹ Of these, "carboxylic acids, such as native fatty acids or fatty acid mixtures, dimer fatty acids and trimer fatty acids are preferred. Specific examples of the fatty acids apart from the saturated types are, in particular, the monounsaturated or polyunsaturated acids palmitoleic, oleic, elaidic, petroselic, erucic, ricinoleic,

¹The description includes at least column 3, line 16 to column 5, line 62 of U.S. Patent No. 6,726,798.

hydroxymethoxystearic, 12-hydroxystearic, linoleic, linolenic and gadoleic acid.”² “In addition, “[o]ne preferred embodiment of the invention is characterized by the use of esters or partial esters of the **above-mentioned** fatty acids with monohydric or polyhydric alcohols.”³ Significantly, the esters required by claim 1 are not specifically identified by Boege et al. as potential “fatty” compounds until later in the patent document. And then, they are merely identified as “examples of suitable esters.”⁴

Boege et al. also disclose that their “fatty” compounds may be used in wide-ranging amounts: “the ratio by weight of the styrene polymer to the plasticizing fatty compound is 100:0.5 to 50, preferably 100:2.5 to 40 **and, above all, 100:7.5 to 15.**”⁵ Boege et al., do not suggest, for example, that lesser amounts of one type of “fatty” compound are preferred whereas greater amounts of another type of “fatty” compound are preferred. They simply suggest that, relative to the amounts required by claim 1, that large amounts of **any** “fatty” compounds be used to plasticize the composition.

According to M.P.E.P., §2131.02, when a claimed composition is not specifically named or disclosed by the cited reference, “but instead it is necessary to select portions of teachings within a reference and combine them, *e.g.*, select various substituents from a list of alternatives given for placement at specific sites on a generic chemical

²Boege et al., U.S. Patent No. 6,726,798 at column 3, lines 30-33.

³Boege et al., U.S. Patent No. 6,726,798 at column 4, lines 5-8, emphasis added.

⁴“Examples of suitable esters besides the partly saponified fats, such as glycerol monostearate, are preferably the natural fats and oils of rape (new and old), sunflowers, soya, linseed, castor, coconuts, oil palms, oil palm kernels and oil trees and methyl esters thereof. Preferred fats and oils are, for example, beef tallow with a chain distribution of 67% oleic acid, 2% stearic acid, 1% heptadecanoic acid, 10% saturated C.sub.12 to C.sub.16 acids, 12% linoleic acid and 2% saturated acids containing more than 18 carbon atoms or, for example, the oil of new sunflowers (NSf) with a composition of around 80% oleic acid, 5% stearic acid, 8% linoleic acid and around 7% palmitic acid. The corresponding epoxides and reaction products with maleic anhydride, for example, may of course also be used. Other examples are partly and completely dehydrated castor oil, partly acetylated castor oil, ring opening products of epoxidized soybean oil with dimer fatty acid.” Boege et al., U.S. Patent No. 6,726,798 at column 4, lines 41-57.

⁵Boege et al., U.S. Patent No. 6,726,798 at column 5, lines 63-65, emphasis added.

formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). If one of ordinary skill in the art is able to 'at once envisage' the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be 'at once envisaged.' One may look to the preferred embodiments to determine which compounds can be anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962)."

In this instance, Boege et al. fail to specifically name or disclose the composition defined by claim 1 which requires specific esters in specific amounts. Nor would this composition be "at once envisaged" since Boege et al. disclose a wide range of "fatty compositions" in a wide range of amounts.

While Boege et al. specifically mention that fatty acid esters of the type required by claim 1 may be used as their "fatty" compound,⁶ Boege et al. fail to suggest using the esters required by claim 1 in the amount required by claim 1: "the ratio by weight of the styrene polymer to the plasticizing fatty compound is 100:0.5 to 50, preferably 100:2.5 to 40 and, above all, 100:7.5 to 15."⁷ Consistent with this, Boege et al. provide a number of exemplary compositions and only one includes, as a component of the plasticizer, an ester having at least two unsaturated aliphatic carbon-carbon bonds. As a plasticizer, Boege et al. suggest using rapeseed oil fatty acid methyl ester (RME); rapeseed oil, however, contains a mixture of fatty acids with only about 28% of the

⁶"In addition, fatty acid esters and derivatives thereof obtainable by epoxidation may also be used. Examples of such esters are soybean oil fatty acid methyl ester, linseed oil fatty acid methyl ester, ricinoleic acid methyl ester, epoxystearic acid methyl ester, epoxystearic acid-2-ethylhexyl ester. Preferred glycerides are triglycerides, for example rapeseed oil, linseed oil, soybean oil, castor oil, partly and completely dehydrated castor oils, partly acetylated castor oil, soybean oil epoxide, linseed oil epoxide, rapeseed oil epoxide, epoxidized sunflower oil." Boege et al., U.S. Patent No. 6,726,798 at column 4, lines 58-67.

⁷Boege et al., U.S. Patent No. 6,726,798 at column 5, lines 63-65.

mixture containing two or more unsaturated aliphatic carbon-carbon bonds; the remainder of the fatty acids are not polyunsaturated.⁸

Viewed from another perspective, Boege et al. fail to disclose any preference for “fatty compounds” corresponding to the esters required by claim 1. They are merely on a long list of compounds which may be used, with carboxylic acids and certain esters derived therefrom being preferred. And, regardless of the specific “fatty” compound selected, Boege et al. expressly suggest and exemplify using greater amounts of the “fatty” compound than is permitted by claim 1. If anything, therefore, Boege et al. lead persons of ordinary skill away from and not to the invention defined by claim 1.

Applicants’ undersigned counsel thanks Examiner Cain for the courtesy shown in a telephone interview conducted on July 18, 2006. Also on the call were Keith D. Strassner and Eric W. Anderson, representatives of applicants’ assignee, and Elizabeth Millard, a summer intern at the Senniger Powers law firm. During the call, the amendments and arguments outlined herein were discussed, but no agreement was reached. Examiner Cain specifically asked applicants to confirm that at least 50% of the fatty acid content of canola oil contains at least two unsaturated carbon-carbon bonds; further investigation revealed that canola oil may not satisfy this requirement and thus, it has been omitted. Examiner Cain also specifically inquired about Sample 3a of Table 1 of Boege et al.; in particular, it should be noted that “SO-Epoxy/DFA” is the reaction product of epoxidized soybean oil with dimer fatty acid in coco-2-ethylhexyl ester. Notably, epoxidized soy oil is not an ester and the epoxidation reaction consumes unsaturated carbon-carbon bonds of the unsaturated fatty acid content of soy oil; documentation of this representation can be provided upon request. Thus, Boege et al. fail to specifically disclose or exemplify any composition corresponding to the requirements of claim 1.

For the above reasons, the Applicants respectfully request withdrawal of the rejection of claims 1-14, 17-19, 24, 25, 28-31, and 34-36 under 35 U.S.C. 102(b).

In view of the foregoing, favorable reconsideration and allowance of all claims is requested.

⁸The fatty acid content of a number of natural oils is provided in Table I of applicants’ specification. In addition, Table I identifies the number of unsaturated bonds appearing in each of the oils. Rapeseed oil contains C18 fatty acid containing two double bonds (16 %), C18 fatty acid containing three double bonds (8%), and C20-24 fatty acids containing three double bonds (4%).

UMR 1528.1 (98UMR016)
PATENT

**REPLY UNDER 37 C.F.R. 1.116
- EXPEDITED PROCEDURE -
TECHNOLOGY CENTER 1714**

Please apply any charges or overpayment to deposit account 19-1345.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'EJH', written over a horizontal line.

Edward J. Hejlek, Reg. No. 31,525
SENNIGER POWERS
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

EJH/ARK/dep/leb